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ABSTRACT

Facilities and schemes for training and retraining vocational education teachers are needed in developed and developing countries, but such training must be cost-effective. Some characteristics of cost-effective schemes include the following: adaptability, coordination between various providers, good planning, and adequate financial support. Activities to be undertaken by the training scheme could include planning, research and development activities, monitoring and assessment, staff development, exchange of information, and establishment/improvement of trainer development facilities. A facility for coordinating and directing the research and training needs of vocational education in a country should be established. Such a national resource center could be patterned after the National Center for Research in Vocational Education in the United States. The role of a national resource center should be to (1) provide facilities and materials for trainers; (2) document and control training materials; (3) disseminate training information and materials; (4) establish and maintain an information network at the national, regional, and international levels; and (5) provide consultancy services. Resource centers can be established either as a separate entity or an addition to an existing institution. A governing body should be appointed and programs should be developed according to these guidelines: to access trainer development needs, to explore using existing facilities, and to plan on a national scale involving government and private industry. (KC)

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COST-EFFECTIVE NATIONAL SCHEMES

Jose D. Lacson

With the growing awareness and recognition of the important role played by trainers in skills transference and the development process, the emergence of the evolutionary concept in trainers development is both timely and appropriate. However the inherent concept of this approach bring to the fore the limitations of the schemes currently adopted. In many countries, trainers training program is characterized by multiplicity of programs conducted by various institutions which leads to uncoordinated and duplication of efforts as well as wastage of human and material resources. Though, ideally all these programs should be lodged with a single entity, its feasibility may be marred in some countries by political reasons. Another impediment faced by developed countries is the inadequate capability of training institutions to retrain their trainors fast enough to cope with technological change. On the other hand, trainer training programs in developing countries can not expand rapidly due to the limited number of available trainers. These shortcomings can be partly traced to the absence of facilities and low level of educational technology that will effect a dynamic growth of trainers.

The above-mentioned issues necessitate a review of current approaches and strategies and adoption of cost-effective mechanism that can provide adequate and relevant training services at a minimum cost. This concern has been implicity discussed in various conferences, seminars and workshops with an end in view of enhancing the internal capability of each country in this field and fostering the technical cooperation among countries. Needless to say, the efficacy of programmes is a matter of national concern in the light of the limited resources at the disposal of each country.

Contrary to common belief, the effectiveness and efficiency of a program does not hinge on the magnitude of allotted resources but on the management of these resources. Thus, cost-effectiveness in this context would refer to the efficacious allocation and utilization of resources on adequate and relevant programs and schemes that would contribute to the achievement of a pre-conceived set of objectives and goals.

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In view of the difference in socio-economic and political conditions prevailing in each country, a prescription consisting of a set of approaches, schemes and strategies applicable to any country can not be drawn. Instead this paper shall attempt to characterize a cost-effective national scheme and formulate strategies that would ensure the continous viability and efficiency of these schemes. Afterwhich a description of some facilities that can be adopted shall be illustrated. The paradigm exemplified here has not been actually assessed with regards to its cost-effectiveness, although conceptually it sufficed and meets the criterion that has been set. Lastly, programme development guidelines shall be outlined to assist proponents of efficacious programs in selecting and designing cost-effective national scheme/s appropriate to their socio-economic milieu.

Again it should be emphasized that the contents of this paper should not be treated as a "hard and fast rule" but should be viewed as a guide to program planners and policy decision-makers.

Characteristics of Cost-Effective Schemes

A review of trainors development program in different countries reveal certain program characteristics contributory to its success or failure and effectiveness or ineffectiveness. Briefly, these are:

Adaptive

A survey conducted by the Manpower Services Commission of England in 1975 revealed that some trainer training institutions in this country were "flourishing with many courses and full numbers in each course while others were faltering with few courses and low numbers." A closer examination of these results further show that "popular institutions had adapted and changed over time" while "the unpopular ones had not deviated from the 1965 syllabus and treated the course in an academic and theoretical manner."

These findings point to the necessity of continously monitoring and evaluating current approaches and schemes vis the requirements of the trainers, vocational training institutions and the industry as well as the planning of programs and activities. Although, rigidity and inflexibility of a system would not substantially increase the operating expenses of these endeavors, its effectiveness would definitely be reduced.

Dynamism does not connote sophistication nor the use of high level and advanced technology which does not match the socio-economic milieu wherein it operates. Trainers training which is based on forward-looking requirements

and not on the needs of the past requires strengthening of research and development activities. Inasmuch as these require huge financial resources, cooperation and networking among institutions would reduce duplication of efforts and wastage of resources.

Coordinated

As mentioned in the introductory paragraphs, many countries have a multiplicity of programs which may result to duplicity and uncoordinated efforts, non-uniformity of standards and non-optimal use of trainers. A cost-effective national scheme needs to ensure coordination of efforts of all concerned institutions to develop the internal capability of filling the gaps in trainers development given the limited resources. This shortcoming can be traced to the absence of a central policy and coordinating body.

Strong linkages can be effected through a creation of a tripartite body composed of workers, industry and trainers who shall be responsible for planning and policy making affecting trainers training. The participants of the Seminar on Trainers Training in New Delhi, India (October 5-11, 1982) strongly recommends the creation of a national training council or board by each government. However variation in its structure may occur to suit the specific needs of each country.

Besides external linkages, coordination within the vocational education system needs to be forged and strengthened. Performance of a trainer to a large extent is based on curriculum and training materials developed, skills standards and vocational guidance. Linkages have to be intensified in vocational education system which is highly centralized.

Well-Planned

A common characteristic of trainers training in most countries is its sporadic nature resulting into uncoordinated efforts and at times inappropriateness. Lack of profound understanding among program planners of the needs of trainers and possible approaches that will effectively respond to these requirements as well as inability to project trainer development requirements explain the fragmented and case-to-case approach employed by most institutions.

Planning of a national scheme is closely tied with research and development activities. The latter does not only refer to training software development but also on development of national schemes which shall improve the effectiveness of the trainers development system in

response to current and future needs. As planning is the so-called "Siamese Twin" of evaluation, continuous monitoring and assessment of these approaches should be pursued. Institutional reforms, if need be, have to be made. An information base have to be established for planning, evaluation and decision-making purposes. Another important consideration in planning a national scheme is an assessment of the technical capability of the various trainer training institution to optimize their contribution to the national endeavor.

Well-Supported

Besides careful planning, necessary financial support needs to be accorded to trainers training for proper implementation of planned programs and schemes. Recommendation of the consultants of the Consultative Meeting on trainers training held in Turin, Italy. (15-27 February 1982) is to appropriate a major proporton of available funds for training from aid-giving agencies to trainer training. The importance of adequate support to trainers development can be partly traced to its multiplier effect.

Inasmuch as huge financial commitment is required to implement trainors development program, scheme have to be devised to generate income that wil sustain these programs since generally budgetary allocation of the National Government is inappropriate. For private institutions, financial resources is generated through its seed capital and profit. The latter is dependent among others on the quality of its service. In the case of government institutions, income generated from projects is utilized subject to government rules and procedures and thus it is not necessarily utilized to improve equipments and facilities, upgrade compensation of staff and the improvement of the services it renders. Although assistance can be sought from developed donor countries, problems on sustenance of these programs arises since most countries does not have enough financial resources to sustain these projects.

Being the necessary and sufficient conditions to ensure cost effectiveness, these characteristics can likewise be used as a parameter to determine the efficacy of schemes adapted in any country.

Trainers Development Facilities

At the macro-level, schemes for trainors development aim to provide the skilled manpower required for economic growth of a country. This can be attained through improvement of the quality of skills training. Thus, cost-effective national schemes can pursue the following specific objectives:

1. to provide an efficient allocation of human and material resources that wil ensure a dynamic approach to trainors development;

2. to provide adequate facilities in the development and professionalization of trainers;

3. to promote a favorable climate for the effective implementation of trainers development program;

4. to effectively address the requisites for trainers development through formulation and implementation of well-designed plans, programs and policies; and

5. to stimulate the professional growth of trainers through an efficient exchange of information.

This requires an efficacious management of the various elements in trainers development which are within the control of program administrators and managers. Further, a continous environmental analysis is required to effect changes in plans of action and prepare for contingency. Environmental scanning can likewise assist program managers in determining factors beyond their control which can however be influenced (e.g. legislations).

Towards these end-objectives, several measures have to be undertaken to address trainors development effectively which are to wit as follows:

1. Formulation of plans: although it is difficult to formulate a national plan, this is an important ingredient to provide a clear direction for, as well as delineation of functions of, the various institutions engaged in trainers development. This applies particularly in countries where these agencies proliferate to minimize sporadic and uncoordinated efforts. Likewise, program planners are compelled to anticipate and project future directions which trainors development in particular and vocational training in general, have to pursue.

2. Research and development activities: These activities emanates from a well-designed plan that gives proper direction as to which aspect in trainers development needs strengthening. Similarly research and development trends can serve as an input in the formulation of plans.

3. Monitoring and assessment: Closely related to the two-above mentioned measures is the provision of adequate information for appraisal of needs of trainors, capability and performance of existing institutions and requirements of vocational training for economic

development. In the same manner, these evaluation results serve as a vital element in drawing up and revising plans and programs.

4. Staff development: It has been continually stressed that trainers development is vital for the efficient operation of the vocational training network. However, staff development for the teaching and non-teaching staff of trainer and research institutions also have to be undertaken to familiarize them with approaches adopted in other countries and to upgrade their technical skills.

5. Exchange of information: Considering the vast information requirements of trainers, provision has to be made for an exchange of information not only among research and training institutions within and among countries but also to the trainers themselves. Further, in many countries where diverse agencies and organizations implement training programs, awareness of the existence of facilities for trainers training is inadequate. This needs to be addressed to operate an efficient trainer training system at the national level.

   Generally, trainers acquire new information and skills upon attending trainer training programs, seminars, workshops and conferences. Publication on trainer development is however limited. Measures such as the National Resource Center has to be embarked on to safeguard the professional development of trainers.

6. Establishment/improvement of trainer development facilities: Special provision has to be made for promotion and implementation of training scheme for teaching staff, research and development work and establishment and updating of standards for training of trainers and exchange of information.

These measures correspond to the requirements of all countries. However, addition to the list can be made to suit the individual needs of each government. Further, specific projects to implement these measures would vary among countries depending on the types and magnitude of existing institutions, availability of resources and extent of the requirements of trainers and vocational training institutes.

Alternative Approaches

Organized systems of education, training and development of human resources for socio-economic growth have long been a standard approach in the industrialized nations in the world. As far as Asia and Pacific are concerned, considerations have been made to adopt the institutes in developed countries.

Centralized National Institute

The National Institute shall mainly address the professional development of trainers, curriculum developers and program administrators composing the vocational education community. In addition, trainer training institutions, researchers and regional and international organizations can have access to the vast information stored in the Institute. Specifically, the functions of the Institute shall include:

1. provide needs asessment of trainer training requirements at the macro and micro level;

2. program plans, policies, strategies and approaches based on the national priorities;

3. conduct seminars, workshops, and conferences on a provincial, national, regional and international levels;

4. provide consultancy services for the improvement of trainers training;

5. establish and install a national acreditation and certification system for trainers;

6. undertake research and development activities for an improved and expanded orientation in trainers development;

7. provide technical information services in support of trainers development;

8. coordinate, monitor and regulate trainer training program conducted by various institutions operating within the country; and

9. develop and disseminate instructional materials and aids to its end-users.

To carry out these functions, the National Institute shall have a planning, programming and evaluation unit, curriculum and training materials development unit, information center and a coordinating and monitoring group. Facilities for seminars, workshops and conferences, information center, audio-visuals, reproduction/duplication and laboratory workshops have to be provided.

In view of the prohibitive costs and the time element involved in building, equipping and operationalizing this Institute, most countries with budgetary limitations veer away from establishing this Institute as a separate entity. Commonly, this Institute is attached to a research and development institution to strengthen linkages between

trainers development and vocational education since the former is a vital component of the latter. The optimization of human resources and existing facilities further support the adaptation of this framework. A third option available for countries without research and development institution is to upgrade existing facilities of selected vocational training institutions which shall serve as the Centralized National Institute and its regional centers.

In the United States, a National Academy for Vocational Education was established as an integral part of the National Centre for Research in Vocational Education (NCRVE) in response to the increasing demand for training profesionals at all levels in vocational education. The National Academy operates an institute and in-residence programme. The institute program plans, promotes and conducts workshops, seminars and conferences for vocational, technical and other training professionals. Most of these activities are conducted on a cost-recovery basis, with income received from participant registration. On the other hand, the in-residence programme is an open-entry/open-exit programme which offers career, vocational, technical and other training professionals an opportunity for in-residence experience at the NCRVE. This programme can be availed by national and international participants who intend to pursue an individual professional development plan by using resources of the National Centre, Ohio State University and other cooperating agencies.*

The Department of Education, Culture and Sports in the Philippines which is tasked with the formal vocational and technical education established a National Center for Technician Education and Staff Development (NCTESD) and three (3) Regional Centers for Technical Education and Staff Development (RCTESD) to satisfy regional and national needs for skills and employment creation. These centers to be cost-efective are considered as extensions of selected institutions and are provided with development potentials, qualified teachers, high level of management standards and local support. The Marikina Institute of Science and Technology has been developed to serve as the NCTESD and shall expand its functions to include among others, organization of in-service training programs, conduct of research and development activities and establishment of cooperation and collaboration between educational institutions and industry. The RCTESD basically shall assume the same functions as the NCTESD although its scope of operation is limited by geographical coverage. The criteria for selection of the location of regional centers were accessibility, management and educational standards, faculty qualifications and past experiences in staff development activities.

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* Robert E. Nelson, Research and Development Related to Future Trends in the Training of Trainers

In the non-formal sector, the National Manpower and Youth Council (NMYC) established the National Institute for Skills Development (NISD) where facilities for trainors development is incorporated. The NISD shall serve as the training technology development arm in the area of manpower training and development. Its main functional concerns include training systems and models, trade skills and training standards, models and schemes for trainees recruitment, selection and guidance, training materials development and packaging, direct training services for trainers, trade testing officers, guidance counsellors and training managers, documentation and information, center management and technical audit and research in the field of training and technology. To carry out its functions as a research and development arm, NISD has the following departments:

1. Training Technology Department: designs, develops, produces and distributes training standards, training materials and aids;

2. Trainor Development Department: develops and implements programs on trainors training and management of vocational education for NMYC instructors, those from the industries and other government institutions;

3. Skills Standards Development Department: develops trade skills standards and test to ensure quality of training and standard of output;

4. Vocational Guidance Department: develops vocational guidance models and systems, approaches and instruments;

5. National Documentation Center: develops and maintains an information network in support of skills development;

6. Center Management and Technical Audit: evaluates the operation and performance of the Regional Manpower Training Centers (RMTCs) vis-a-vis the training demands in the region.

A holistic approach in improving the quality of skills training is undertaken by NMYC in recognition of the intrinsic relationship and interplay of these functional areas. Trainers development is not regarded in isolation, its linkages with the other elements composing the training system is enhanced with the integration of these units in one institution. Further, Regional Trainers Training Centers are identified in selected Regional Manpower Training Centers to expand the coverage and increase the accessiblity of trainers training program throughout the country.

National Resource Center*

The National Resource Center (NRC) shall assist trainers to be dynamic, continously evolving and innovative by providing an opportunity for methods development, information search and applied research. It shall complement and supplement the other schemes currently adopted in the development of trainers by providing a continuity in their professional development. Specifically, the NRC shall:

1. provide adequate facilities and materials for trainers practice in the local production of training softwares and sector-related training aids;

2. exercise documentation and information control of training materials and sector-related training aids at national, regional and international level;

3. disseminate training information and materials relevant to the needs of members of the academic community and practitioners of vocational education;

4. establish and maintain an information network at the national, regional and international levels; and

5. provide consultancy services in the area of application of new training techniques and training softwares development.

Services shall be rendered to the folowing categories of users, namely: program administrators, trainer training and research institutions, regional and international organization.

Two alternatives are open to any country who plans to establish a resource center that is, as a separate entity or attached to an existing organization and institution. As a separate entity, the NRC can be established as a foundation wherein membership shall be composed of trainers, training and research institutions. On the other hand, it can be attached or be an integral part of a trainer training institution, vocational education institution or vocational research institution. To increase the accessibility of the services of the NRC, regional centers can be established.

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* For a detailed discussion, please refer to the National Resource Center paper of Mr. Jose D. Lacson that will be presented in this workshop

Governing Body

To address the issues on policy directions and coordination of efforts, a governing body or technical panel composed of trainer training, research and vocational institutions needs to be created. This body shall discuss issues affecting trainers training and prescribe concrete directions that will ensure an improved quality of skills training and professionalization of trainers.

The alternative approaches cited are not mutually exclusive, revealing that combinations of approaches can be made depending on the objective/s that have to be achieved at the national level.

Programme Development Guidelines

Although facilities for trainers development is prevalent in developed countries and in some developing countries, these can not be adopted en toto unless exactly the same conditions prevail between the countries concerned. However, since the possibility of this situation occurring is nil, guidelines are discussed below to assist program planners in deciding what facility to adopt and how it should be adapted.

1. Assess trainer development needs: This entails matching of the goals of trainers development at the national level, the capability and performance of each country in this field. The objectives of the scheme at a national level have been previously discussed. However, it should be noted that these goals are dependent on the economic plan of the government. Trainer needs in terms of technical and pedagogical skills have to be assessed. Technical capability of existing institutions in terms of the quality and quantity of equipments, facilities, teaching and non-teaching staff have to be surveyed to determine which institution needs to be strengthened and in what aspect. Performance of the existing institutions vis-a-vis the requirements of the vocational education sector and the economic plan of the government reveal organizational and operational issues that have to be addressed. In the same manner, efficacy of these institutes can be assessed. Gaps in the trainer training system show possible areas of intervention.

2. Explore possibility of using existing facilities before establishing a new one: This is in view of the high financial requirement and time element involved in establishing a new facility.

3. Develop a national scheme/s as part of the larger system of vocational education and within the context of the overall development of the country: This

requires the use of a systematic planning process with clear defined goals to identify initial resources, constraints, costs and evaluation design.

4. Involvement of the private industries, vocational and related institutions and association of trainers in the planning and policy-making: This is to coordinate and integrate efforts in the vocational education system and to plan adequate and relevant services to trainers and ultimately the economy.

5. Adopt an evolutionary approach to the development of trainers: This is efficacious in the long run and would ensure a dynamic growth of the trainers and the vocational education system.

6. Explore possibility of adopting income generating projects: This would in effect lessen the burden on the government to continually support the national scheme/s financially.

Concluding Remarks

Although the discussion above centered on the development of a cost-effective national scheme within the context of a country's environment, the designing of such a scheme is an extensive project that requires total coordination and cooperation among local and international organizations. Networking and technical cooperation between countries are essential.